

CLAIMS

I claim:

1           1.       A sealing element for use in a reciprocating gas compressor valve comprising  
2 elastomeric material.

1           2.       The sealing element of Claim 1 wherein the reciprocating gas compressor  
2 valve is a single element non-concentric valve.

1           3.       The sealing element of Claim 1 wherein the reciprocating gas compressor  
2 valve is concentric ring valve.

1           4.       The sealing element of Claim 1 wherein the reciprocating gas compressor  
2 valve is ported plate valve.

1           5.       A sealing element for use in a reciprocating gas compressor valve comprising  
2 a layer of elastomeric material bonded to a substrate.

1           6.       The sealing element of Claim 5 wherein the reciprocating gas compressor  
2 valve is a single element non-concentric valve.

1           7.       The sealing element of Claim 5 wherein the reciprocating gas compressor  
2 valve is concentric ring valve.

1           8.       The sealing element of Claim 5 wherein the reciprocating gas compressor  
2   valve is ported plate valve.

1           9.       The sealing element of Claim 1 wherein the elastomeric material is selected  
2   from the group consisting of natural rubber, synthetic rubber, fluoro-elastomer, thermoset  
3   elastomer, thermoplastic elastomer, elastomeric copolymers, elastomeric terpolymers,  
4   elastomeric polymer blends and elastomeric alloys.

1           10.      The sealing element of Claim 5 wherein the elastomeric material is selected  
2   from the group consisting of natural rubber, synthetic rubber, fluoro-elastomer, thermoset  
3   elastomer, thermoplastic elastomer, elastomeric copolymers, elastomeric terpolymers,  
4   elastomeric polymer blends and elastomeric alloys.

1           11.      The sealing element of Claim 1 wherein said elastomeric material operates  
2   between about -120 °F to 450 °F.

1           12.      The sealing element of Claim 5 wherein said elastomeric material operates  
2   between about -120 °F to 450 °F

1           13.      The sealing element of Claim 1 wherein said elastomeric material operates  
2   between about 0 to 10,000 psid.

1           14.    The sealing element of Claim 5 wherein said elastomeric material operates  
2   between about 0 to 10,000 psid.

1           15.    A reciprocating gas compressor valve comprising an elastomeric sealing  
2   element.

1           16.    A reciprocating gas compressor valve comprising a sealing element having at  
2   least one layer of elastomeric material.

1           17.    The reciprocating gas compressor valve of Claim 15 wherein said valve is a  
2   single element non-concentric valve.

1           18.    The reciprocating gas compressor valve of Claim 15 wherein said valve is a  
2   concentric ring valve.

1           19.    The reciprocating gas compressor valve of Claim 15 wherein said valve is a  
2   ported plate valve.

1           20.    The reciprocating gas compressor valve of Claim 16 wherein said valve is a  
2   single element non-concentric valve.

1           21.    The reciprocating gas compressor valve of Claim 16 wherein said valve is a  
2 concentric ring valve.

1           22.    The reciprocating gas compressor valve of Claim 16 wherein said valve is a  
2 ported plate valve.

1           23.    A reciprocating gas compressor comprising a reciprocating gas compressor  
2 valve having an elastomeric sealing element.

1           24.    A reciprocating gas compressor comprising a reciprocating gas compressor  
2 valve having a sealing element, said sealing element having at least one layer made of  
3 elastomeric material.

1           25.    A method of making a reciprocating gas compressor valve comprising the  
2 following steps:

3                   applying elastomeric material to a substrate to produce an elastomeric  
4 sealing element; and

5                   assembling said sealing element into a reciprocating gas compressor  
6 valve for use in a reciprocating gas compressor.

1           26.    A method of making a reciprocating gas compressor valve comprising the  
2 following steps:

3                       making a sealing element of elastomeric material; and  
4                       assembling said sealing element into a reciprocating gas compressor  
5 valve for use in a reciprocating gas compressor.

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1           27.    A sealing element for use in an unloader comprising elastomeric material.

1           28.    The sealing element of Claim 27 wherein the unloader is a plug unloader.

1           29.    The sealing element of Claim 27 wherein the elastomeric material is selected  
2 from the group consisting of natural rubber, synthetic rubber, fluoro-elastomer, thermoset  
3 elastomer, thermoplastic elastomer, elastomeric copolymers, elastomeric terpolymers,  
4 elastomeric polymer blends and elastomeric alloys.

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1           30.    An unloader comprising an elastomeric sealing element.

1           31.    The unloader of Claim 30 wherein said unloader is a plug unloader.

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1           32.    A reciprocating gas compressor comprising an unloader having a sealing  
2 element, said sealing element having at least one layer made of elastomeric material.

1           33.     A method of making an unloader comprising the following steps:  
 2                     applying elastomeric material to a substrate to produce an elastomeric  
 3     sealing element; and  
 4                     assembling said sealing element into an unloader for use in a  
 5     reciprocating gas compressor.

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 1           34.     A method of making an unloader comprising the following steps:  
 2                     making a sealing element of elastomeric material; and  
 3                     assembling said sealing element into an unloader for use in a  
 4     reciprocating gas compressor.

1